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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Masato Sasaki

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EXAMINER

CARTON, MICHAEL

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,917	Applicant(s) SASAKI ET AL.	
	Examiner MICHAEL CARTON	Art Unit 4118	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/24/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/24/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Masaaki (Japan Publication No. 07-091594) in further view of Burdick (US Patent No. 7214402).

3. With respect to claim 1, Purdum discloses a method of delivering frozen products comprising: storing frozen products requiring cold insulation in a cold-insulating container (column 1 lines 6-15). Purdum does not disclose the storing device structured of a vacuum heat-insulating material; and loading the cold-insulating container in one of a refrigerator vehicle, cold-insulating vehicle, and room-temperature vehicle other than a freezer vehicle for delivery. Masaaki discloses a vacuum heat-insulating material (fig 1 description). Burdick discloses loading cold-insulating container in one of a refrigerator vehicle, cold-insulating vehicle, and room-temperature vehicle other than a freezer vehicle for delivery (claim 3). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum with a vacuum heat-insulating material and load the cold-insulating container in one of a refrigerator vehicle, cold-insulating vehicle, and room-temperature vehicle other than a freezer vehicle for delivery as taught by Masaaki and Burdick, respectively, for the purpose of improving insulating

Art Unit: 4118

performance and providing consistent quality from one location to the next from where the food items are produced, respectively.

4. With respect to claim 2, Masaaki discloses the vacuum heat-insulating material is structured so that a core material made by compression-molding (paragraph 49 detailed description) a fiber material (paragraph 39 detailed description) is covered with a gas-barrier jacket material 2 (fig 1), and an inside covered with the jacket material is depressurized for vacuum encapsulation 7 (fig 4) (paragraph 36 detailed description).

5. With respect to claim 3, Masaaki discloses the vacuum heat-insulating material has a thickness ranging from 2 to 20 mm inclusive (paragraph 62 example).

6. With respect to claim 4, Masaaki discloses the vacuum heat-insulating material has an initial thermal conductivity up to 0.02 W/mK (paragraph 63 example).

With respect to claim 7, Purdum discloses the method of delivering frozen products of except for a cold-storage agent having a melting point ranging from -27 to -18 °C inclusive is housed in the cold-insulating container. Purdum does however disclose that by "bracketing" the target temperature range between the phase change temperatures of the two materials, the latent heat of transformation associated with each material's phase change is advantageously utilized to maintain the temperature of the payload within the target temperature range (column 5 lines 19-23). Purdum further discloses in column 6 lines 20-33 that the target temperature can vary to any limitations imposed by specific application. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a melting point target temperature between -27 and -18 deg. Celsius, bracketing that range, and having

Art Unit: 4118

the capability of obtaining the specified melting point, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

7. With respect to claim 9, Purdum discloses the method of delivering frozen products except for the container having an internal capacity of at least 70L. It would have been an obvious matter of design choice to modify Purdum so that the container has an internal capacity of at least 70L, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

8. With respect to claim 10, Purdum discloses the method of delivering frozen products wherein a protective case for housing the cold-insulating container (fig 1) is provided, and the frozen products are delivered while the cold-insulating container is housed in the protective case (column 4, lines 51-67).

9. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Masaaki (Japan Publication No. 07-091594) in view of Burdick (US Patent No. 7214402) in further view of Bane (US Patent No. 5441170).

10. With respect to claim 5, Masaaki discloses the method of delivering frozen products of claim 1 wherein the cold-insulating product has outstanding insulation efficiency (paragraph 84 effect of invention), and Purdum is capable of housing frozen products at least at a predetermined percentage with respect to an internal capacity

Art Unit: 4118

thereof. Masaaki does not state exact temperatures that are capable of being maintained. Bane, however, discloses maintaining a storage temperature using dry ice, or cubes of conventional ice as the cold storage agent(column 3 lines 47-50).

Conventional ice has a core temperature of 0 Celsius and dry ice has a temperature of -78.5 Celsius. Using dry ice as taught by Bane with the insulating properties as taught by Masaaki would be well capable of maintaining 0 Celsius for two hours. It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by maintaining a temperature of up to 0 Celsius for two hours as taught by Bane for the purpose of transporting goods in a frozen state to maintain freshness.

11. With respect to claim 8, Masaaki discloses the method of delivering frozen products of claim 1 wherein the cold-insulating container is capable of housing at least 1kg of the cold storage agent per internal capacity of 50 L (paragraph 63), but does not disclose maintaining an average inside temperature up to 0 °C for at least 10 hours.

Masaaki does not state exact temperatures that are capable of being maintained. Bane, however, discloses maintaining a storage temperature using dry ice, or cubes of conventional ice as the cold storage agent (column 3 lines 47-50). Conventional ice has a core temperature of 0 Celsius and dry ice has a temperature of -78.5 Celsius. Using dry ice as taught by Bane with the insulating properties as taught by Masaaki would be well capable of maintaining 0 Celsius for at least 10 hours. It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by maintaining a temperature of up to 0 Celsius for ten hours as taught by Bane for the purpose of transporting goods in a frozen state to maintain freshness.

Art Unit: 4118

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum in view of Masaaki (Japan Publication No. 07-091594) in further view of Burdick (US Patent No. 7214402) in further view of Konarski (US Patent No. 6519968).

13. With respect to claim 6, Purdum/Masaaki discloses all claimed elements in the method of delivering frozen products except for a cold-storage agent being housed in the cold-insulating container in an amount according to time taken for delivery. Konarski discloses a cold-storage agent being housed in the cold-insulating container in an amount according to time taken for delivery (column 3 lines 31-35). It would be obvious to one ordinarily skilled in the art at the time the invention was made to adjust the amount of cold-storage agent being housed in the cold-insulating container in an amount according to time taken for delivery as taught by Konarski for the purpose of ensuring the frozen product arrives to its destination in a frozen state.

14. Claims 11-12, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Masaaki (Japan Publication No. 07-091594) in view of Burdick (US Patent No. 7214402) in further view of Casutt (US Patent No. 4129248).

15. With respect to claim 11, Purdum discloses the method of delivering frozen products wherein a collapsible, cold insulating container comprising four peripheral walls; a bottom face; and an openable and closable lid 110 (fig 1), wherein each of the members is formed of a sheet material (column 8 lines 66-67 – column 9 lines 1-6), Purdum does not disclose the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one

Art Unit: 4118

another not in use. A planar vacuum heat-insulating material therein, and the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use. Casutt discloses the respective members forming a box in use, and the respective members overlapping with one another not in use (fig 6). Masaaki discloses a planar vacuum heat-insulating material (description of drawing 1). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum with the cold-insulating container being collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use, and a planar vacuum heat-insulating material as taught by Casutt and Masaaki for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.

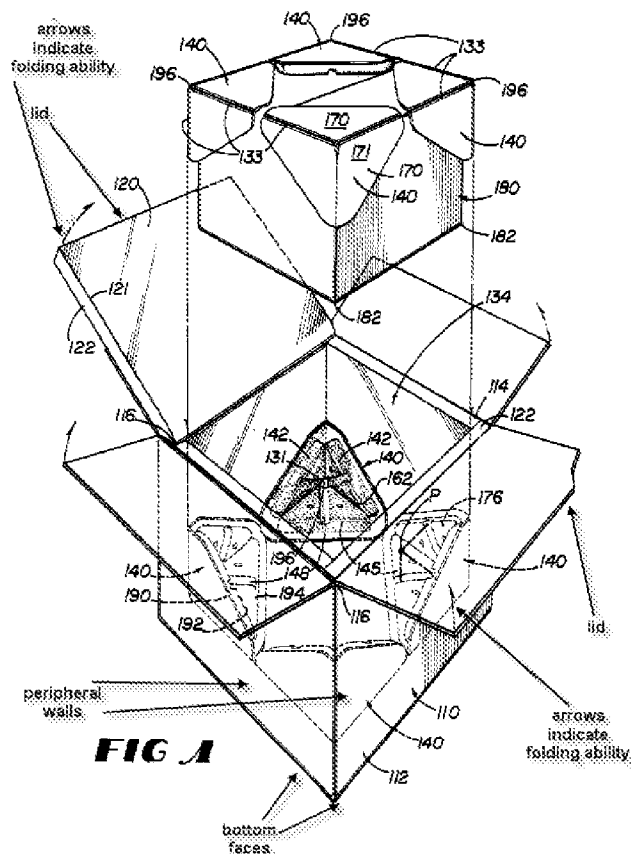
16. With respect to claim 12, Purdum discloses the method of delivering frozen products wherein a collapsible cold-insulating container (fig 1) comprising: four peripheral walls connected into a square shape so as to be foldable one another 110 (fig 1); two lids connected to two opposed ones of the peripheral walls along upper side edges thereof so as to be foldable (see fig 1 below); and two bottom faces that are connected to the two peripheral walls connected to the lids (see fig 1 below), along the lower side edges thereof, so as to be foldable (see fig 1 below). Purdum does not disclose the container has a collapsible structure, wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not in

Art Unit: 4118

use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another. Each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable. Casutt discloses the container has a collapsible structure (fig 6) wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box (column 2 lines 5-9), and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another (figs 5, 6). Masaaki discloses each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in

Art Unit: 4118

substantially a central part, so as to be foldable (fig 3, 4). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having the container has a collapsible structure wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another, and each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable as taught by Casutt and Masaaki, respectively, for the purpose having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.



17.

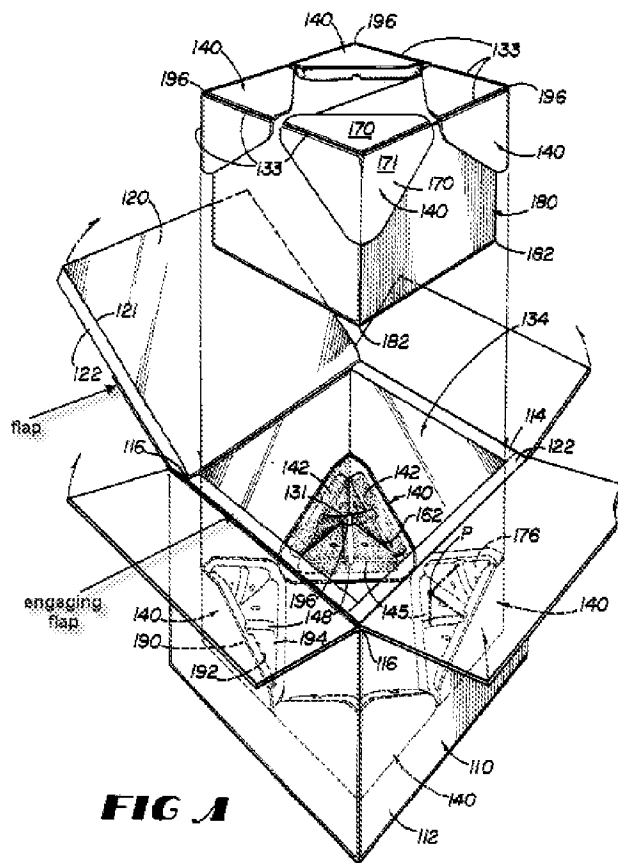
18. With respect to claim 15, Purdum discloses the method of delivering frozen products wherein the cold insulating container includes a flexible bottom sheet for covering an entire external surface of the two bottom faces is attached along lower side edges of the four peripheral walls (column 12 lines 41-50). Purdum does not disclose when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral walls and the lids are folded outwardly of the peripheral walls. Casutt discloses when the cold-insulating container is collapsed, the bottom faces 2, 3 (fig 5) are folded inwardly of the peripheral walls. It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral

Art Unit: 4118

walls and the lids are folded outwardly of the peripheral walls as taught by Casutt for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume.

19. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Masaaki (Japan Publication No. 07-091594) in view of Burdick (US Patent No. 7214402) in view of Casutt (US Patent No. 4129248) in further view of Kutun (US Publication No. 2004/0118854).

20. With respect to claim 13, Purdum discloses the method of delivering frozen products wherein the cold insulating container includes on one of the lids, an engaging flap along a side edge thereof engaging with an other lid (see fig 1 below); and on the other lid, a engaging flap, wherein turning the two lids into a closed position matches side edges of both lids and brings the engaging flap on the one lid into contact with the other lid to engage each other (see fig 1 below). Purdum does not disclose the flaps engaging with hook and loop fasteners, rather with tape. Kutun discloses the flaps engage with hook and loop fasteners (paragraphs 37-38). It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having the flaps engage with hook and loop fasteners as taught by Kutun for the purpose of closing the container and keeping it in a closed state.

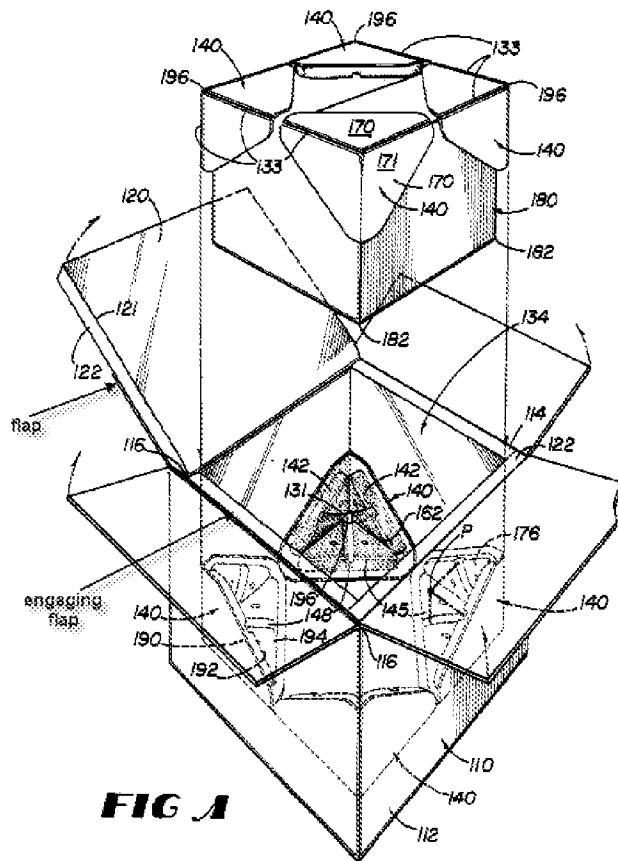


21.

22. With respect to claim 14, Purdum discloses the method of delivering frozen products wherein the cold insulating container includes on each of the two foldable peripheral walls, a flexible engaging flap along an upper side edge thereof so that the flap is urged upwardly rather than laterally (see fig 1 below). Purdum does not disclose on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with each other, the fasteners being hook and loop fasteners. Kutun discloses on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are

Art Unit: 4118

turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with each other. The fasteners being flexible hook- and-loop fasteners (paragraphs 37-38). It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by having on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with each other, the fasteners being flexible hook- and-loop fasteners as taught by Kutun for the purpose of closing the container and keeping it in a closed state.



23.

24. Claims 16-17, 20-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Casutt (US Patent No. 4129248) in further view of Masaaki (Japan Publication No. 07-091594).

25. With respect to claim 16, Purdum discloses a collapsible, cold insulating container comprising four peripheral walls; a bottom face; and an openable and closable lid 110 (fig 1), wherein each of the members is formed of a sheet material (column 8 lines 66-67 – column 9 lines 1-6), Purdum does not disclose the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use. A planar vacuum heat-

Art Unit: 4118

insulating material therein, and the cold-insulating container is collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use. Casutt discloses the respective members forming a box in use, and the respective members overlapping with one another not in use (fig 6). Masaaki discloses a planar vacuum heat-insulating material (description of drawing 1). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum with the cold-insulating container being collapsible with the respective members forming a box in use, and the respective members overlapping with one another not in use, and a planar vacuum heat-insulating material as taught by Casutt and Masaaki for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.

26. With respect to claim 17, Purdum discloses a collapsible cold-insulating container (fig 1) comprising: four peripheral walls connected into a square shape so as to be foldable one another 110 (fig 1); two lids connected to two opposed ones of the peripheral walls along upper side edges thereof so as to be foldable (see fig 1 below); and two bottom faces that are connected to the two peripheral walls connected to the lids (see fig 1 below), along the lower side edges thereof, so as to be foldable (see fig 1 below). Purdum does not disclose the container has a collapsible structure, wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are

Art Unit: 4118

folded in a direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another. Each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable. Casutt discloses the container has a collapsible structure (fig 6) wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box (column 2 lines 5-9), and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another (figs 5, 6). Masaaki discloses each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable (fig 3, 4). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum

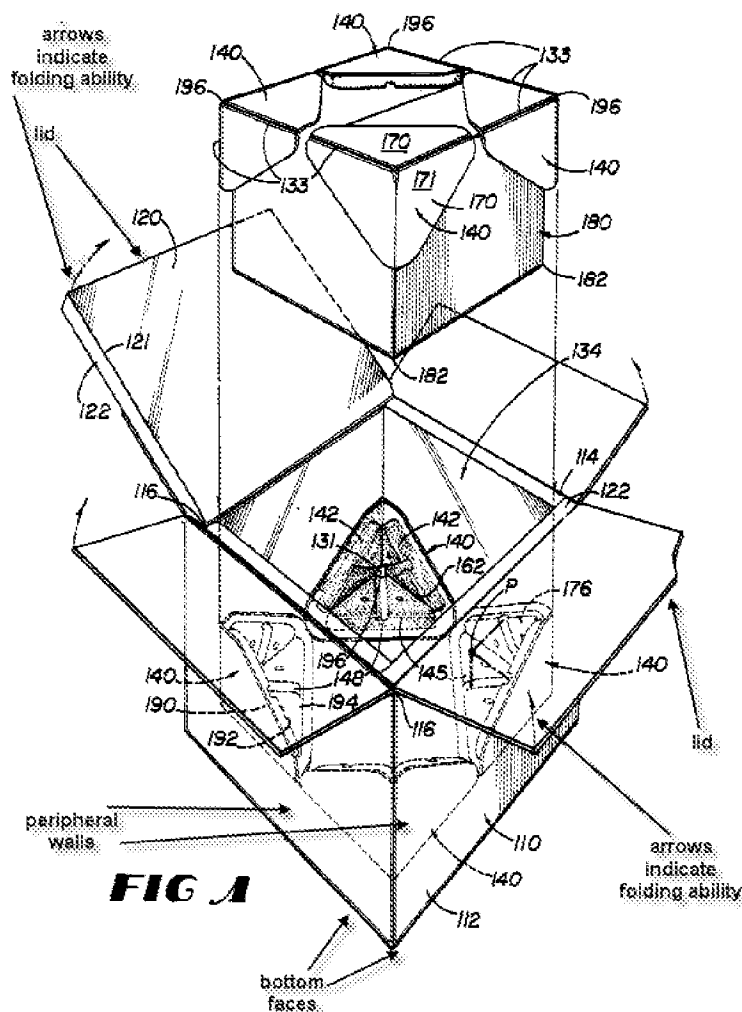
Art Unit: 4118

by having the container has a collapsible structure wherein, in use, the two lids and bottom faces are turned into a closed position for engagement to form a box, and not in use, engagement of the lids and bottom faces is released, the bottom faces are folded inwardly or outwardly of the peripheral walls, and the lids are folded in a opposite direction opposite to that of the bottom faces, and while the foldable peripheral walls are folded inwardly along the folding lines, the adjacent peripheral walls are brought closer to each other so that the lids, peripheral walls, and bottom faces overlap with one another, and each of the peripheral walls, lids, and bottom faces is formed of a sheet material enveloping a planar vacuum heat-insulating material therein, and in each of the two peripheral walls adjacent to the peripheral walls connected to the lids and bottom faces, the vacuum heat-insulating material is divided along a folding line extending in a direction of a height thereof in substantially a central part, so as to be foldable as taught by Casutt and Masaaki, respectively, for the purpose having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume and improving insulating performance while thinning the insulating body, respectively.

27. With respect to claim 20, Purdum discloses a flexible bottom sheet for covering an entire external surface of the two bottom faces is attached along lower side edges of the four peripheral walls (column 12 lines 41-50). Purdum does not disclose when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral walls and the lids are folded outwardly of the peripheral walls. Casutt discloses when the cold-insulating container is collapsed, the bottom faces 2, 3 (fig 5)

Art Unit: 4118

are folded inwardly of the peripheral walls. It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by when the cold-insulating container is collapsed, the bottom faces are folded inwardly of the peripheral walls and the lids are folded outwardly of the peripheral walls as taught by Casutt for the purpose of having the container in a folded state when delivered by the manufacturer for reducing shipping costs by reducing shipping volume.



28.

Art Unit: 4118

29. With respect to claim 21, Masaaki discloses the vacuum heat-insulating material is structured so that a core material made by compression-molding (paragraph 49 detailed description) a fiber material (paragraph 39 detailed description) is covered with a gas-barrier jacket material 2 (fig 1), and an inside covered with the jacket material is depressurized for vacuum encapsulation 7 (fig 4) (paragraph 36 detailed description).

30. With respect to claim 22, Masaaki discloses the vacuum heat-insulating material has a thickness ranging from 2 to 20 mm inclusive (paragraph 62 example).

31. With respect to claim 23, Masaaki discloses the vacuum heat-insulating material has an initial thermal conductivity up to 0.02 W/mK (paragraph 63 example).

With respect to claim 24, Purdum discloses all claimed elements except for a cold storage agent having a melting point ranging from -27 to -18 Deg. Celsius inclusive housed in the container. Purdum does however disclose that by "bracketing" the target temperature range between the phase change temperatures of the two materials, the latent heat of transformation associated with each material's phase change is advantageously utilized to maintain the temperature of the payload within the target temperature range (column 5 lines 19-23). Purdum further discloses in column 6 lines 20-33 that the target temperature can vary to any limitations imposed by specific application. As a result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a melting point target temperature between -27 and -18 deg. Celsius, bracketing that range, and having the capability of obtaining the specified melting point, since it has been held that where the general

Art Unit: 4118

conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

32. With respect to claim 25, Masaaki discloses the cold-insulating container is capable of housing at least 1kg of the cold storage agent per internal capacity of 50 L (paragraph 63), but does not disclose maintaining an average inside temperature up to 0 °C for at least 10 hours. Purdum discloses maintaining a desired temperature for a period of time (column 9 lines 35-40). Purdum is capable of maintaining the desired temperature for the desired time range as he also discloses the target temperature can be altered to meet the requirements (column 7 lines 9-19). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Masaaki so that he would maintain an average inside temperature up to 0 °C for at least 10 hours as taught by Purdum for the purpose of controlling the temperatures perishable frozen type materials during transit for at least 72 hours.

33. With respect to claim 26, Purdum discloses the claimed invention except for the cold-insulating container having an internal capacity of at least 70L. Purdum does not disclose the volume of the container. It would have been an obvious matter of design choice to modify Purdum to have an internal capacity of at least 70L, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Art Unit: 4118

34. With respect to claim 27, Purdum discloses at least one of the sheet material, the engaging flaps, and the bottom face sheet is made of a waterproof cloth (column 12 lines 41-50).

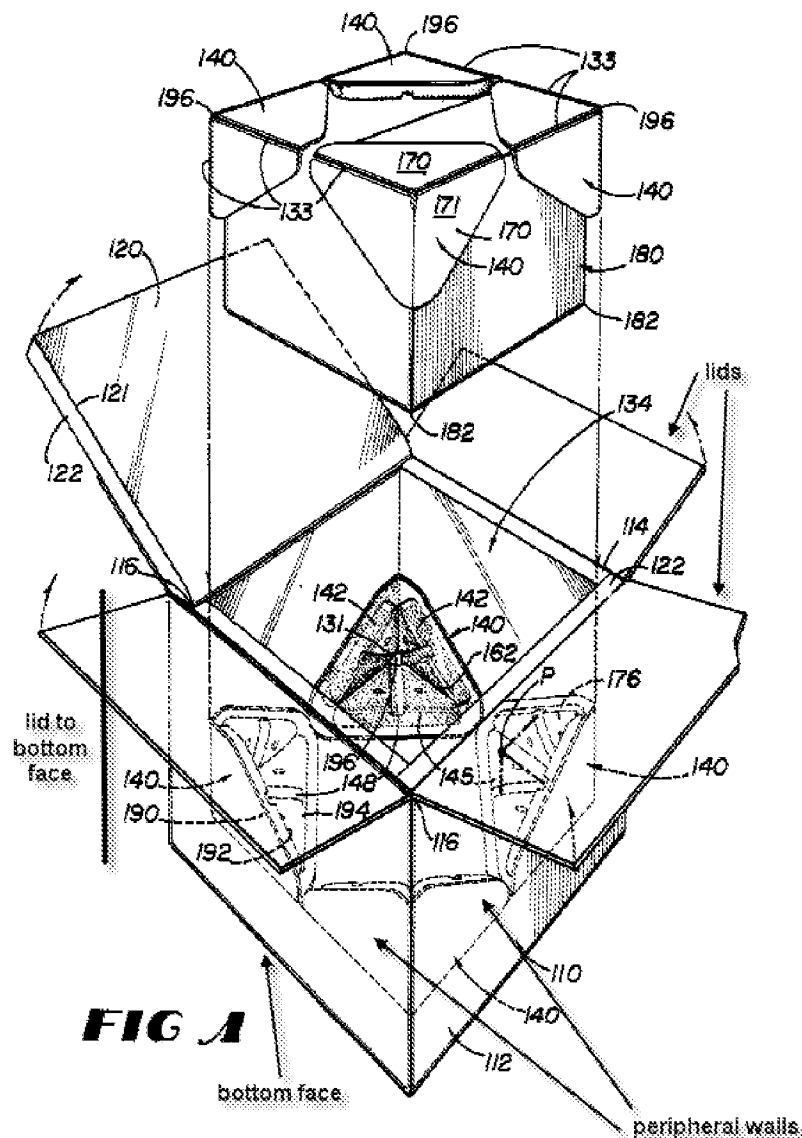
35. With respect to claim 28, Purdum discloses additional strengthening is provided on at least one face facing to an outside in use or not in use, among faces of the peripheral walls, lids, and bottom faces (column 11 lines 7-25).

36. With respect to claim 29, Purdum discloses a cold-storage agent holder for holding the cold-storage agent therein on an inner surface of at least one of the lids, peripheral walls, and bottom faces 140 (fig 1).

37. With respect to claim 30, Purdum discloses a flexible inner cover inside of the lids, wherein the inner cover is attached along an upper side edge of one of the peripheral walls connected to one of the lids, and the inner cover is not smaller than a length from the upper side edge to a bottom edge of an inner surface of a facing one of the peripheral walls (column 11 lines 7-25).

38. With respect to claim 31, Purdum discloses a cold storage agent holder for holding the cold-storage agent therein on an inner surface of at least one of the lids, peripheral walls, bottom faces, and the inner cover 140 (fig 1).

39. With respect to claim 32, Purdum discloses in each of the two lids and the two bottom faces, a length from the lid to the facing bottom face thereof and a length from the bottom face to the facing lid thereof are smaller than a height of the peripheral walls (see fig 7 below).



40.

41. With respect to claim 33, Purdum discloses all claimed elements except for a protective case for housing the collapsible cold-insulating container, wherein the protective case is capable of housing the collapsible cold-insulating container formed into a box configuration in use, and housing a plurality of collapsible cold-insulating containers in a collapsed configuration not in use. Casutt discloses a folding box (fig 8)

Art Unit: 4118

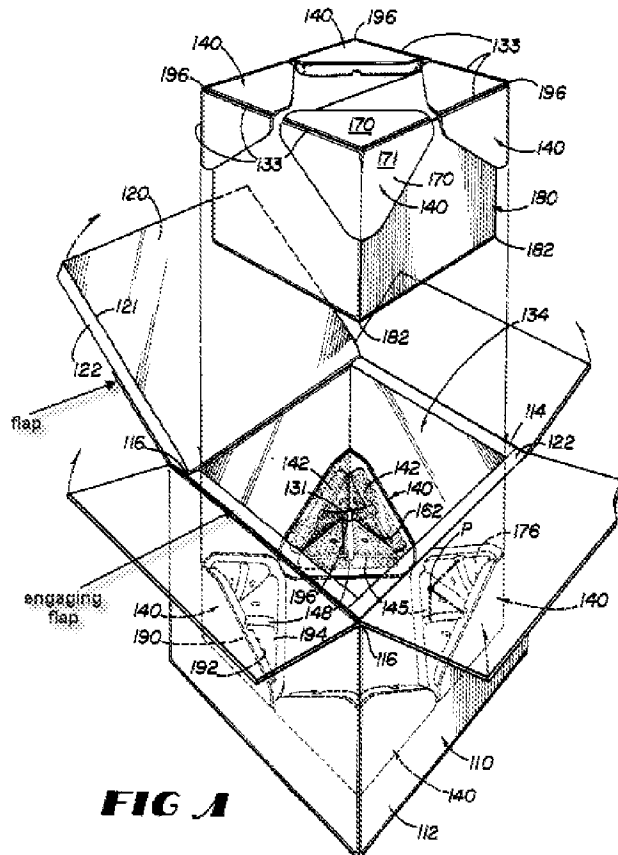
capable of being used as a protective case for housing the collapsible cold-insulating container, wherein the protective case is capable of housing the collapsible cold-insulating container formed into a box configuration in use, and housing a plurality of collapsible cold-insulating containers in a collapsed configuration not in use (fig 8). It would be obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum by making the container a folding box capable of being used as a protective case for housing the collapsible cold-insulating container, wherein the protective case is capable of housing the collapsible cold-insulating container formed into a box configuration in use, and housing a plurality of collapsible cold-insulating containers in a collapsed configuration not in use as taught by Casutt for the purpose of minimizing space occupied when shipping empty containers.

42. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purdum (US Patent No. 5899088) in view of Masaaki (Japan Publication No. 07-091594) in view of Casutt (US Patent No. 4129248) in further view of Kutun (US Publication No. 2004/0118854).

43. With respect to claim 18, Purdum discloses that on one of the lids, an engaging flap along a side edge thereof engaging with an other lid (see fig 1 below); and on the other lid, a engaging flap, wherein turning the two lids into a closed position matches side edges of both lids and brings the engaging flap on the one lid into contact with the other lid to engage each other (see fig 1 below). Purdum does not disclose the flaps engaging with hook and loop fasteners, rather with tape. Kutun discloses the flaps engage with hook and loop fasteners (paragraphs 37-38). It would have been obvious to

Art Unit: 4118

one ordinarily skilled in the art at the time the invention was made to modify Purdum by having the flaps engage with hook and loop fasteners as taught by Kutun for the purpose of closing the container and keeping it in a closed state.

**FIG 1**

44.

45. With respect to claim 19, Purdum discloses on each of the two foldable peripheral walls, a flexible engaging flap along an upper side edge thereof so that the flap is urged upwardly rather than laterally (see fig 1 above). Purdum does not disclose on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with

Art Unit: 4118

each other. The fasteners being flexible hook- and-loop fasteners. Kutun discloses on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with each other. The fasteners being flexible hook- and-loop fasteners (paragraphs 37-38). It would have been obvious to one ordinarily skilled in the art at the time the invention was made to modify Purdum with on each of the two lids a fastener corresponding with the engaging flap; and when the two lids are turned into a closed position, the lids depress the engaging flaps inwardly and make contact therewith so that the fasteners and corresponding ones engage with each other, the fasteners being flexible hook- and-loop fasteners as taught by Kutun for the purpose of closing the container and keeping it in a closed state.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL CARTON whose telephone number is (571)270-7837. The examiner can normally be reached on Monday-Friday 7:30am - 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quang Thanh can be reached on 571-272-4982. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4118

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. C./
Examiner, Art Unit 4118

/Quang D. Thanh/
Supervisory Patent Examiner, Art
Unit 4118